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cont
- (e) putative dehydroquinase dehydratase or fragment thereof;
 - (f) shikimate kinase or fragment thereof;
 - (g) chorismate synthase or fragment thereof;
 - (h) chorismate mutase or fragment thereof;
 - (i) tyrosine transaminase or fragment thereof;
 - (j) putative tyrosine transaminase or fragment thereof;
 - (k) transaminase A or fragment thereof;
 - (l) putative transaminase A or fragment thereof;
 - (m) homogentisic acid dioxygenase or fragment thereof; and
 - (n) geranylgeranylpyrophosphate synthase or fragment thereof.

2. (Twice Amended) The substantially purified nucleic acid molecule according to claim 1, wherein said nucleic acid molecule comprises a nucleic acid sequence selected from the group consisting of SEQ ID NO: 1, SEQ ID NO: 100, SEQ ID NO: 147, SEQ ID NO: 153, SEQ ID NO: 161, SEQ ID NO: 180, SEQ ID NO: 199, and SEQ ID NO: 232.

sub
C1

10. (Once Amended) An isolated nucleic acid molecule comprising a sequence that hybridizes under conditions of 2.0 X sodium chloride/sodium citrate (SSC) at about 65°C to a nucleic acid molecule having a sequence selected from the group consisting of SEQ ID NOs: 1, 100, 147, 153, 161, 180, 199, and 232 and complements thereof.

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11. (Once Amended) The isolated nucleic acid molecule, according to claim 10, wherein said isolated nucleic acid molecule comprises a nucleic acid sequence selected from the group consisting of SEQ ID NO: 1, SEQ ID NO: 100, SEQ ID NO: 147, SEQ ID NO: 153, SEQ ID NO: 161, SEQ ID NO: 180, SEQ ID NO: 199, and SEQ ID NO: 232.

~~12. (Once Amended) The isolated nucleic acid molecule according to claim 10, wherein said isolated nucleic acid molecule comprises a nucleic acid sequence of SEQ ID NO:1.~~

Sub D3 } 13. (Once Amended) The isolated nucleic acid molecule according to claim 10, wherein said isolated nucleic acid molecule comprises a nucleic acid sequence of SEQ ID NO:100.

14. (Once Amended) The isolated nucleic acid molecule according to claim 10, wherein said isolated nucleic acid molecule comprises a nucleic acid sequence of SEQ ID NO:147.

15. (Once Amended) The isolated nucleic acid molecule according to claim 10, wherein said isolated nucleic acid molecule comprises a nucleic acid sequence of SEQ ID NO:153.

Sub C2 } 16. (Once Amended) An isolated nucleic acid molecule comprising a nucleic acid sequence of SEQ ID NO:158 or complements thereof.

Sub B D3 } 17. (Once Amended) The isolated nucleic acid molecule according to claim 10, wherein said isolated nucleic acid molecule comprises a nucleic acid sequence of SEQ ID NO:161.

B2 } 18. (Once Amended) The isolated nucleic acid molecule according to claim 10, wherein said isolated nucleic acid molecule comprises a nucleic acid sequence of SEQ ID NO:180.

B3 } 20. (Once Amended) The isolated nucleic acid molecule according to claim 10, wherein said isolated nucleic acid molecule comprises a nucleic acid sequence of SEQ ID NO:199.

Sub B D3 } 21. (Once Amended) The isolated nucleic acid molecule according to claim 10, wherein said isolated nucleic acid molecule comprises a nucleic acid sequence of SEQ ID NO:232.

Please add new claims 23-26.

B4 } 23. (Added) A substantially purified nucleic acid molecule that encodes a maize shikimate dehydrogenase or fragment thereof.

24. (Added) The substantially purified nucleic acid molecule according to claim 23, wherein said nucleic acid molecule comprises the nucleic acid sequence of SEQ ID NO: 158.

25. (Added) An isolated nucleic acid molecule consisting of a nucleic acid sequence selected from the group consisting of SEQ ID NO: 1, SEQ ID NO: 100, SEQ ID NO: 147, SEQ ID NO: 153, SEQ ID NO: 158, SEQ ID NO: 161, SEQ ID NO: 180, SEQ ID NO: 184, SEQ ID NO: 199, and SEQ ID NO: 232.

26. (Added) An isolated nucleic acid molecule consisting essentially of residues selected from the group consisting of: residues 1-252 of SEQ ID NO: 1, residues 1-261 of SEQ ID NO: 100, residues 1-224 of SEQ ID NO: 147, residues 1-167 of SEQ ID NO: 153, residues 1-182 of SEQ ID NO: 158, residues 1-225 of SEQ ID NO: 161, residues 1-281 of SEQ ID NO: 180, residues 1-331 of SEQ ID NO: 199, residues 1-245 of SEQ ID NO: 232 and complements of each.

Remarks

Claims 1, 2 and 10-18 and 20-21 have been amended and new claims 23-26 have been added. Support for these amendments may be found in the original claims and throughout the disclosure including the originally filed claims and sequence listing. No new matter is introduced by these amendments.

With this response, claims 1-2 and claims 10-18 and 20-26 are now pending. Applicants do not believe that any fees other than additional claim fees are due at this time; however, should any additional fees under 37 C.F.R. §§ 1.16 to 1.21 be required for any reason relating to this document, the Commissioner is authorized to deduct the fees from Arnold & Porter Deposit Account No. 50-1824 referencing matter number 16517.233.